

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 07 NOV 2005

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| Applicant's or agent's file reference 02FLSL139PC01 | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/KR2003/001496 | International filing date (day/month/year) 25 JULY 2003 (25.07.2003) | Priority date (day/month/year) |
| International Patent Classification (IPC) or national classification and IPC IPC7 F02F 3/16 | | |
| Applicant LG ELECTRONICS INC. et al | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

| | |
|--|---|
| Date of submission of the demand 21 JUNE 2004 (21.06.2004) | Date of completion of this report 25 OCTOBER 2005 (25.10.2005) |
| Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140 | Authorized officer AHN, Young Woong Telephone No. 82-42-481-5486  |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/001496

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|------|-----|
| Novelty (N) | Claims | 1-14 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 3-14 | YES |
| | Claims | 1-2 | NO |
| Industrial applicability (IA) | Claims | 1-14 | YES |
| | Claims | | NO |

2. Citations and explanations (Rule 70.7)

1. Citations

Reference is made to the following document:

D1: JP 9-100779 A (ZEKUSERU CORP.) 15 April 1997

The subject matter of claim 1 is a piston assembly including a hollow disc-shaped ring fixed to the piston by a shrink fitting process, and welded to the magnet sleeve which is made of the same material.

The subject matter of claims 7 and 11 is a piston assembly including a fixing member fusion-fixed to the magnet sleeve by an applied electric current.

D1 discloses a compressor with an electromagnetic clutch including a stator on a front head by spot-welding a stator installation plate to a bottom surface of the stator.

2. Novelty (PCT Article 33(2))

The prior art document D1 discloses does not a disc-shaped ring and a fixing member. Therefore, the subject matter of claims 1, 7, and 11 is considered to be novel and the subject matter of dependent claims 2-6, 8-10, and 12-14 is also considered to be novel.

3. Inventive Step (PCT Article 33(3))

3.1 Concerning Claims 1, 2

Claims 1 and 2 differ from D1 in that the assembly of claims 1 and 2 is equipped with an additional ring to combine the stator and the piston. However, the shrink method to combine a mechanical part is obvious to a person skilled in this art. Therefore, the subject matter of claims 1 and 2 does not involve an inventive step.

(Continued on Supplemental Sheet.)

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of:

Box V.

3.2 Concerning Claims 3-6

Claims 3-6 relate to a method to combine the magnet sleeve and the ring in claim 1 and are considered to involve an inventive step because the prior art does not teach or fairly suggest any of the embodiments as specially set forth in the claims.

3.3 Concerning Claims 7-14

Claims 7 and 11 differ from D1 in that the assembly of claims 7 and 11 has a fixing member fusion-fixed to the magnet sleeve by an applied electric current. And this method is non-obvious to a person skilled in this art.

Claims 8-10 and claims 12-14 are dependent on claims 7 and 11 respectively.

Therefore, the subject matter of claims 7-14 involves an inventive step.

4. Industrial Applicability (PCT Article 33(4))

The subject matter of claims 1-14 is considered to be industrially applicable.